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From	To
Nancy Rumrill/R9/USEPA/US	Adam Freedman/R9/USEPA/US@EPA
CC	BCC
R9-Deep	
Description Form Used: Reply	
Subject	Date/Time
Re: Fw: CO2 Injection Risk Assessment	01/22/2010 02:29 PM
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Best of luck Nancy

Nancy Rumrill
U.S. Environmental Protection Agency, Region 9
Ground Water Office, WTR-9
75 Hawthorne Street
San Francisco, CA 94105
415-972-3293
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Adam Freedman---01/22/2010 02:00:33 PM---[REDACTED]

From: Adam Freedman/R9/USEPA/US
To: R9-Deep
Date: 01/22/2010 02:00 PM
Subject: Fw: CO2 Injection Risk Assessment

[REDACTED]

-Adam

----- Forwarded by Adam Freedman/R9/USEPA/US on 01/22/2010 01:55 PM -----

From: "Chan, Victor M." <VMChan@SolanoCounty.com>
To: Bruce Kobelski/DC/USEPA/US@EPA
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Date: 01/22/2010 12:43 PM

Subject: CO2 Injection Risk Assessment

Bruce

I work with Ned Ferrario at Solano County and so I am glad you are working with the development of a quantitative risk assessment for the CO2 injection industry.

Solano County Planning Division and Solano County Environmental Health Division are developing strategies to deal with risks such mandating a seismic study to address the potential of induced seismic activity.

Hopefully you can provide more assistance.

One risk is terrorism because I completed a tour in Afghanistan with the US Army Corps of Engineers in 2006.

I was told by Shell Oil that the anti-blowback protection is designed into the well's "injection tree" as check valve branches which are located above the well. However, if a terrorist were to drive a truck and shear off the injection tree he would take out these check valves. This may release all of the contained underground CO2 all at once and potentially cause wide spread asphyxiation.

While a terrorist act is unlikely in Solano County, I have an uneasy feeling that this industry is moving faster than the regulatory agencies can develop all of the rules for risk assessment. The engineering solution is to install a "protected check valve" or "install protective infrastructure around the well".

However, I have yet to see these design features as regulatory requirements. Therefore, I see this as a vulnerability that has not been addressed. When this project is presented at a local public meeting in Solano County, I need a good answer if this specific subject comes up.

My question: Has the US EPA addressed this specific risk?

Victor M Chan, PE, BCEE
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